Table of Contents

1	On-Off Thermostats	6-12
2	On-Off Thermostats – Programmable	13-17
3	Proportional Thermostats	18-20
4	Dampers Controls	21
5	Humidity Controllers	22-23
6	Building Automation	24-31
7	Maxinet – Thermostat Network	32-34
8	Special Controllers	35-36
9	Air Quality	37-38
10	Sensors & Accessories	39

Meitav-tec Naming Rules: (Model NUMEROCLOSUREING)

Product name is usually an abbreviation of product model, followed by various possible features, such as operating voltage, number of Cooling/Heating stages, fan speed, or remote control.

Feature	Description	Abbreviation
Plastic type (shape)	See next page	
System type	Air Condition/Fan-Coil/VAV	AC/FC/VAV
Supply voltage	24VAC/110VAC/220VAC/12VDC	24/110/220/12
Fan speeds	1 Speed/2 Speeds/3 Speeds	1S/2S/3S
System type (AC)	Separate outputs for Cool and Heat	HC## (stages heat, cool)
	Heat Pump system (reversing valve)	HP## (stages heat, cool)
System type (FC)	Separate Proportional outputs for Cool and Heat (0-10V)	P
	One Proportional output for Cool and Heat	PD
	One Pulse Modulating output – 3 wire –open, common, close – for both Cool and Heat	PM
	Two separate Pulse Modulating outputs – 3 wire – open, common, close – for Cool and Heat	PM2
	One Pulse Modulating – 3 wire – open, common, close for Cool and one on/off output for Heat	PMH
Others	several configurations in one product, selectable by DIP switches	SUPER
	Freeze Protection	FP
	Infra Red remote control – optional	IR
	Weekly Program (programmable)	PR
	Special features in the product differentiate it from the same product without the 0X name extension	01/02/03/…

Examples:

ETN24-P-PD-FC-SUPER	Shape: ETN, Voltage: 24VAC, FC Type: 1 (PD) or 2 (P) Proportional outputs, System type: Fan-Coil (FC), DIP switch selectable configurations (SUPER)
FMT24-HP21-3S-PR-IR	Shape: FMT, Voltage: 24VAC, AC Type: Heat pump – 2 stg. Heat and 1 stage cool, Fan speeds: 3 fan speeds, Weekly program (PR), Infra red remote control option (IR)

Thermostats are typically divided to:

1. Flush Mount

FMT

Flush Mount, Vertical type

FMH

Flush Mount, Horizontal type

2. Wall Mount

ETN

CTR/CEM/CEO

TED

ETN24 Series

Wall-mount, 24VAC thermostats, for A/C and Fan-Coil applications

The ETN24 series includes fully featured, stylish thermostats with a large, easy to read display, suitable for light commercial and residential applications.

The ETN24 thermostats range offer control for a large variety of HVAC systems with different configurations, including Cool Only (C), Heat/Cool (HC) or Heat Pump (HP) with 1 or 3 fan speeds.

General Features

- Wall-mount, 24VAC thermostats
- When working with Oil/Gas in Heat Mode the internal fan operation can be disabled
- Adjustable Set point limits for cooling and heating (password protected)
- Compressor protection delay timer
- Auto fan (fan on demand) – optional
- External temperature sensor – optional
- Temperature display – Ambient and Set-Point, or Set-Point display only
- Offset – for temperature reading adjustment
- Lock buttons – optional
- Silicon buttons
- Simple to use
- Energy saving – cost effective, Environmentally Friendly algorithms and logic
- Available in various colors

Model based Features

ETN24-SUPER-SH	ETN24-SUPER-SI	ETN24-SUPER-SF
• 1 or 3 fan speeds – selectable • Contact Input – Turn system off or switch to economy mode (adjustable set-points) • Adjustable dead zone between cooling and heating in auto mode • Configurable time delay between compressor stages	• 1 fan speed only • Heat Pump or Heat/Cool configuration available • Contact Input – Turn system off or switch to economy mode (adjustable set-points) • IR Remote control with timer – optional • Emergency heat mode available in heat pump configuration	• 1 fan speed only • Heat Pump or Heat/Cool configuration available • Contact Input – Indication only • IR Remote control with timer – optional • Emergency heat mode available in heat pump configuration • Filter clean/replace alert with adjustable time

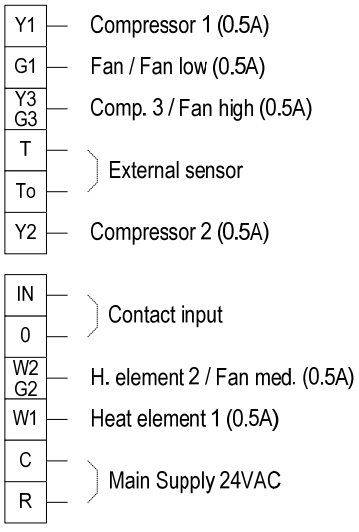
Comparison Table

	ETN24-SUPER-SH	ETN24-SUPER-SI	ETN24-SUPER-SF
# of Compressor stages	Up to 3	Up to 2	Up to 2
Support Heat Pump configuration (Reversing Valve)		●	●
# Electrical Heat elements	Up to 2	Up to 3	Up to 3
Fan Speeds	1 or 3	1	1
Ambient Temperature reading offset	●	●	●
IR Remote Control		○	○
Dry Contact input	●	●	●
Oil/Gas operation in Heat Mode	●	●	●
Emergency Heat in HP Mode		●	●
Temperature Set-Point Limits	●	●	●
Ambient Temperature display	●	●	●
External Temperature sensor	○	○	○
Buttons Lock – optional	●	●	●
Filter clean/replace alert with adjustable time			●
Configurable time delay between compressor stages	●		
Auto Fan (fan on demand)	●	●	●
Compressor Protection delay timer	○	○	○

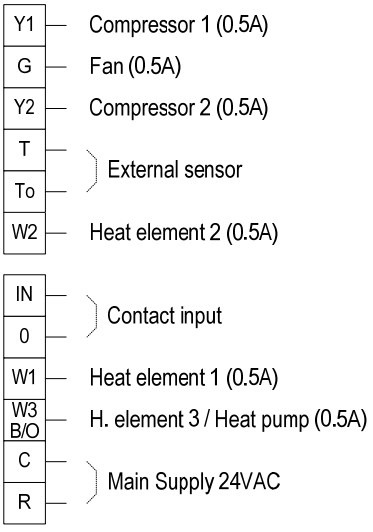
● – standard ○ – option

Wiring Diagrams

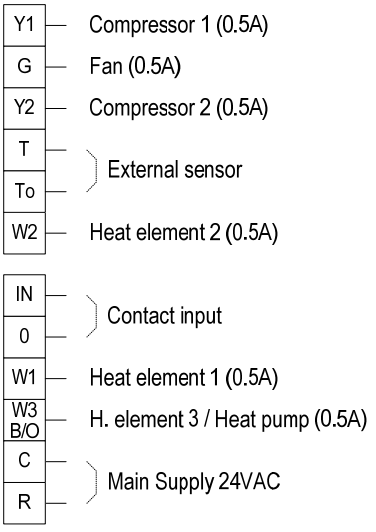
ETN24-SUPER-SH



ETN24-SUPER-SI



ETN24-SUPER-SF



FMT24 Series

Flush-mount, 24VAC thermostats, for A/C and Fan-Coil applications

The FMT24 series includes fully featured reliable, flush-mount thermostats with a large, easy to read display, suitable for light commercial and residential applications.

The FMT24 thermostats range offers control for large variety of HVAC systems with different configurations, including Heat/Cool (HC) or Heat Pump (HP) control systems and different Fan

General Features

- Flush-mount, 24VAC thermostats
- Heat Pump or Heat/Cool configuration available
- Heat pump can be configured for heating or cooling
- Heat Output configuration – Electric or Oil/Gas operation in Heat Mode
- When working with Oil/Gas operation in Heat Mode the internal fan operation can be disabled.
- Emergency Heat in HP mode available in heat pump configuration
- Adjustable Set point limits for cooling and heating
- Compressor protection delay timer
- Auto fan (fan on demand) – optional
- External temperature sensor – optional
- Economy mode with temperature set-points for cooling and heating
- Offset – for temperature reading adjustment
- Silicon buttons
- Simple to use
- Energy saving – cost effective, Environmentally Friendly algorithms and logic

Model based Features

FMT24-SUPER	FMT24-SUPER-2S-FP	Other models
• 1 fan speed • Low temperature alarm indication	• 2 fan speeds • Freeze protection option – with adjustable cut-in and cut-out temperatures, keeping the room temperature above preset value	• Other models available, offering Cool only, Heat only, 3 fan speeds and IR remote control option

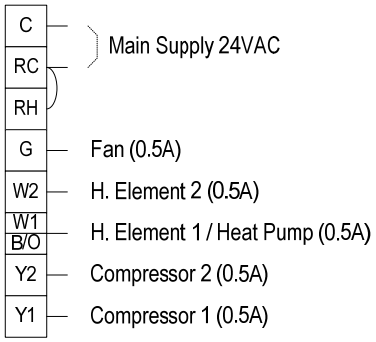
Comparison Table

	FMT24-SUPER (1S)	FMT24-SUPER-2S-FP
# of Compressor stages	**Up to 2**	**1**
Support Heat pump configuration	●	●
# of Electrical Heat elements	**Up to 2**	**Up to 2**
Fan Speeds	**1**	**2**
Ambient Temperature reading offset	●	●
Temperature Scale	**°F/°C**	**°F**
Oil/Gas operation in Heat Mode	●	●
Emergency Heat in HP mode	●	●
Temperature Set-Point limits	●	●
Economy Mode	●	●
External Temperature Sensor	○	○
Freeze Protection – adjustable temperatures		●
Auto Fan (fan on demand) – optional	●	●
Compressor protection delay timer	●	●

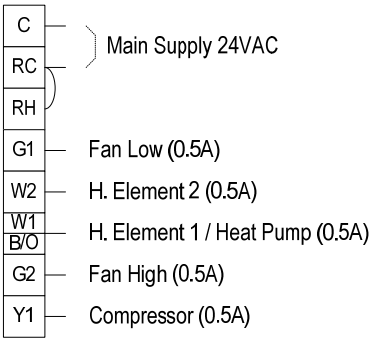
● – standard ○ – option

Wiring Diagrams

FMT24-SUPER (1S)

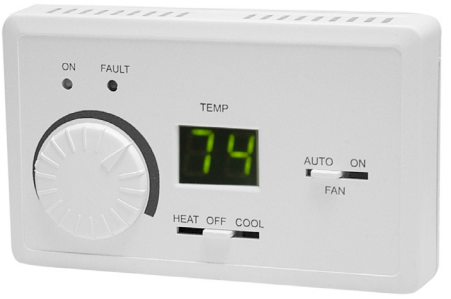


FMT24-SUPER-2S-FP



TED24 Series

Wall-mount, 24VAC thermostats, for A/C and Fan-Coil applications



The TED24 Series offer simple, reliable and cost effective solution that suits commercial or residential applications to control a large variety of HVAC systems, including Fan-Coils.

This thermostat series is one of Meitav-tec best sellers over the years, for proven field reliability.

General Features

- Wall-mount, 24VAC thermostat
- Heat Pump or Heat/Cool configuration available – jumper selectable
- Heat pump can be configured for heating or cooling
- Heat Output configuration – Electric or Oil/Gas operation in Heat Mode – jumper selectable
- When working with Oil/Gas operation in Heat Mode the internal fan operation can be disabled.
- LCD display for Ambient and Set Point Temperature
- External temperature sensor – optional
- °F or °C Temperature scale - jumper selectable
- Fault input (Dry contact)
- Compressor protection delay timer
- Suitable also for Fan-Coil applications
- Energy saving – cost effective, environmentally environmental friendly thermostats

Model based Features

TED24-SUPER	TED24-SUPER-01	TED24-AUTO-SUPER
• 1 fan speed • Modes: Cool/Heat	• 1 fan speed • Modes: Cool/Heat • Special fan logic – When the unit is OFF, the Fan will be active if the fan switch is in "ON" position	• 1 fan speed • Modes: Cool/Heat/Auto

New design – to be released soon

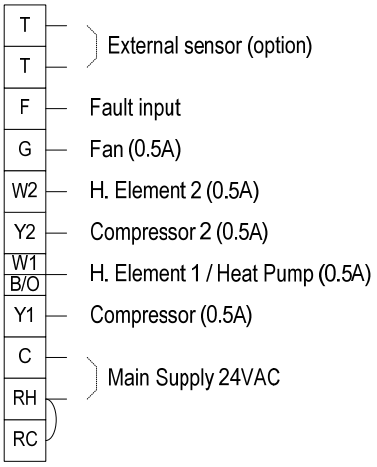
Comparison Table

	TED24-SUPER/TED24-SUPER-01	TED24-AUTO-SUPER
# of Compressor stages	**Up to 2**	**1**
Support Heat pump configuration	●	●
# Electrical Heat elements	**Up to 2**	**Up to 2**
Fan Speeds	**1**	**1**
Oil/Gas operation in Heat Mode	●	●
Ambient Temperature display	●	●
External Temperature Sensor	○	○
Auto Fan (fan on demand) – optional	●	●
Compressor Protection Delay timer	●	●
Temperature Scale	**°F/°C**	**°F/°C**

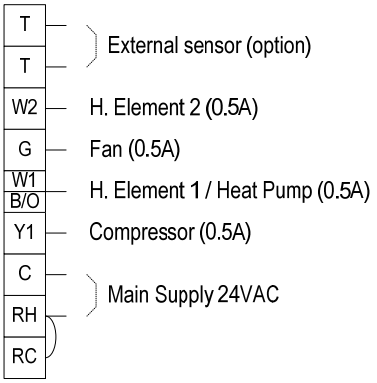
● – standard ○ – option

Wiring Diagram

TED24-SUPER/TED24-SUPER-01



TED24-AUTO-SUPER



FMH-FC-SUPER3 Series

Flush-Mount, 24VAC, 110VAC or 220VAC for most Fan-Coil applications

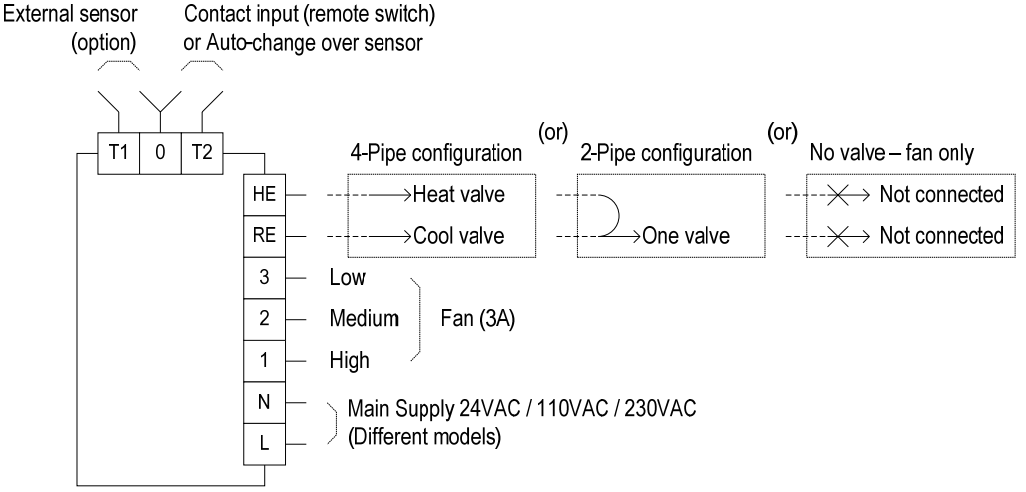
The FMH-FC-SUPER3 series allows users the flexibility of having one main controller for most Fan-Coil applications.

It can be flush-mounted or installed directly into the Fan-Coil, with an External temperature sensor for the return air.

General Features

- Flush-mount, 24VAC, 110VAC or 220VAC, Thermostat
- Fan-Coil supported configurations (By DIP Switch):
  - 4 pipe – 2 valves
  - 2 pipe – 1 valve
  - no valve
- Manual Cool/Heat or Auto-Change between modes (DIP Switch selected)
- Temperature display – Ambient and Set-Point, or Set-Point display only (DIP Switch selected)
- Fan/Auto Fan or all time Auto Fan – (DIP Switch selectable)
- Internal/External temperature sensor (DIP Switch selectable)
- Adjustable Set Point Temperature limits – password protected
- Lock buttons – password protected
- Special Input can be used for:
  - Auto-change over sensor – mode is set based on temperature of the incoming water flow, ideal for 2-pipe systems.
  - Contact input for a remote switch, which sets the mode of one or more thermostats linked together (available only for 2-pipe systems).
  - Contact input to activate Economy Mode – unit works according to pre-determined economy set points
  - Contact input to turn the unit Off
- Energy saving – cost effective, environmentally friendly thermostat
- Available in different colors
- Also available with Proportional (0-10VDC) Valves output – FMH-P-FC-SUPER model

Wiring Diagram



PROG Series

Flush-mount or Wall-mount, 24VAC Programmable Thermostats

The PROG series includes FMT and ETN models, with Simple to The different programs, offering several periods (according to model) per day, are easy to use and provide 24-hour comfort as well as energy savings.

These thermostats control a large variety of HVAC systems with or Heat Pump (HP) and various Fan Speeds.

General Features

- Flush or Wall mount, 24VAC thermostats
- Heat Pump or Heat/Cool configuration available
- Heat pump can be configured for heating or cooling
- Heat Output configuration – Electric or Oil/Gas operation in Heat Mode
- When working with Oil/Gas in Heat Mode the internal fan operation can be disabled
- Adjustable Set point limits for cooling and heating
- Compressor protection delay timer
- Auto fan (fan on demand) – optional
- External temperature sensor – optional
- Offset – for temperature reading adjustment
- Real time clock
- Lock buttons – optional
- Large, clear and easy to read display
- Energy saving – cost efficient, Environmental Friendly algorithms and logic

Model based Features

- 1, 2 OR 3 Fan speeds
- Single or Double set point (Cooling/Heating)
- Freeze protection – When the temperature drops, the Heat and Fan outputs will be activated in order to keep the room temperature above preset value
- IR Remote control – optional
- °F or °C Temperature Scale
- Clock type – AM/PM or 24 Hrs.

Program types (Model Dependant):

- 5-1-1 or 7-Days Program:
  - 5-1-1 – Different programs for the weekdays, Saturday and Sunday
  - 7-Days – Different programs for every day of the week
- Event settings:
  - Start time and Stop time
  - Start time, Stop time and set point
  - Start time, Set cool and set heat
- Number of events per day: 1, 2 or 4

Comparison Table

	FMT-24-SUPER-FP-PROG-US Series			ETN24-SUPER-FP-PROG-US Series			ETN24-SUPER-FP-PROG-EU Series			7-Days Prog.
	FMT-24-SUPER-FP-PROG-US	FMT-24-SUPER-2S-FP-PROG-US	FMT-24-SUPER-3S-FP-PROG-US	ETN24-SUPER-FP-PROG-US	ETN24-SUPER-2S-FP-PROG-US	ETN24-SUPER-3S-FP-PROG-US	ETN24-SUPER-FP-PROG-EU	ETN24-SUPER-2S-FP-PROG-EU	ETN24-SUPER-3S-FP-PROG-EU	ETN24-SUPER-PROG-7DAYS-US
[1]Program Type	5-1-1									7 Days
Events per Day	4									1
Event Settings	Start time, Set Cool Set Heat			Start time, Set Cool Set Heat			Start time, Stop time 1 Set point			Start time Stop time
Clock type	AM/PM						24 Hrs.			AM/PM
# of Compressors stages	2	1	1	2	1	1	2	1	1	2
Heat Pump	●	●	●	●	●	●	●	●	●	●
# of Heat elements (heat-cool config.)	2	2	1	2	2	1	2	2	1	2
# of Heat elements (heat-pump config.)	1	1	-	1	1	-	1	1	-	1
Fan Speeds	1	2	3	1	2	3	1	2	3	1
[2]Temperature Offset	●	●	●	●	●	●	●	●	●	●
Remote Control	○	○	○	○	○	○	○	○	○	
Oil/Gas Heater	○	○	○	○	○	○	○	○	○	○
[3]Emergency Heat	●	-	-	-	-	-	-	-	-	-
Set-Point Temp. limits	●	●	●	●	●	●	●	●	●	
Ambient Temp. display	●	●	●	●	●	●	●	●	●	●
External Temp. sensor	●	●	●	●	●	●	●	●	●	●
Buttons Lock – optional	●	●	●	●	●	●	●	●	●	-
Freeze Protection	●	●	●	●	●	●	●	●	●	-
[4]Auto Fan – optional	●	●	●	●	●	●	●	●	●	●
Compressor Delay	●	●	●	●	●	●	●	●	●	●
Temperature Scale	°F	°F	°F	°F	°F	°F	°C	°C	°C	°C

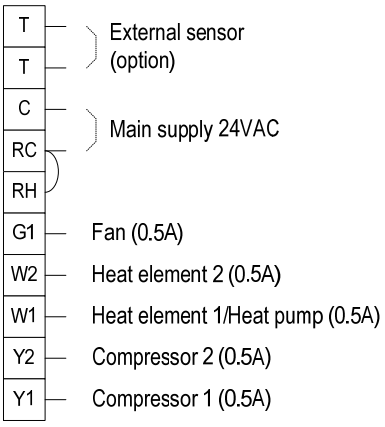
● – standard ○ – option

[1]Program Types:
US – USA type – Day is typically divided into 2 or 4 periods where the user set different set points (for both cool & heat) without ever turning the system off.
EU – Europe type – user can program up to 4 start times and stop times (optionally with one set point – model dependent)

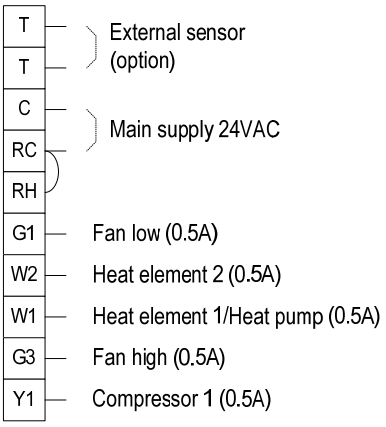
[2]The offset is used for calibration of temperature readings.
[3]Emergency heat mode is available in Heat pump configuration only.
[4]When the Auto fan option is active, the fan will be active only during demand for cooling or heating.

Wiring Diagrams

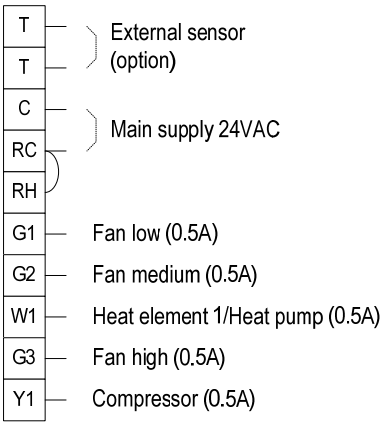
FMT-24-SUPER-FP-PROG-US



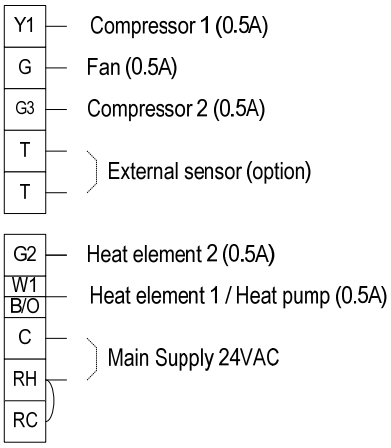
FMT-24-SUPER-2S-FP-PROG-US



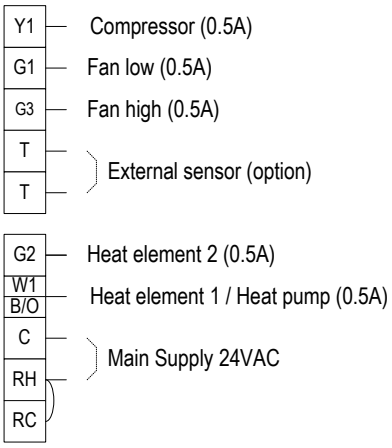
FMT-24-SUPER-3S-FP-PROG-US



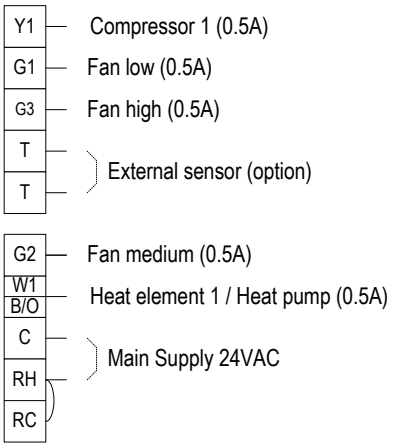
ETN24-SUPER-FP-PROG-US/EU



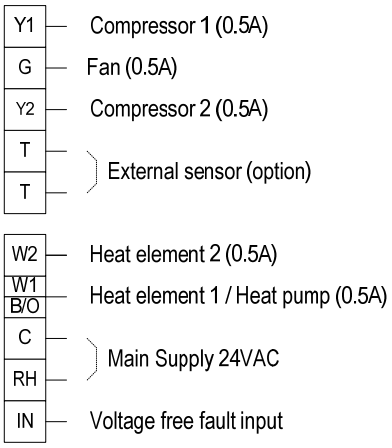
ETN24-SUPER-2S-FP-PROG-US/EU



ETN24-SUPER-3S-FP-PROG-US/EU



ETN24-SUPER-PROG-7DAYS-US



CTR-24-SUPER

Wall mount, 24VAC thermostat, Weekly Programmable, with an extra IR remote control connection for a second location

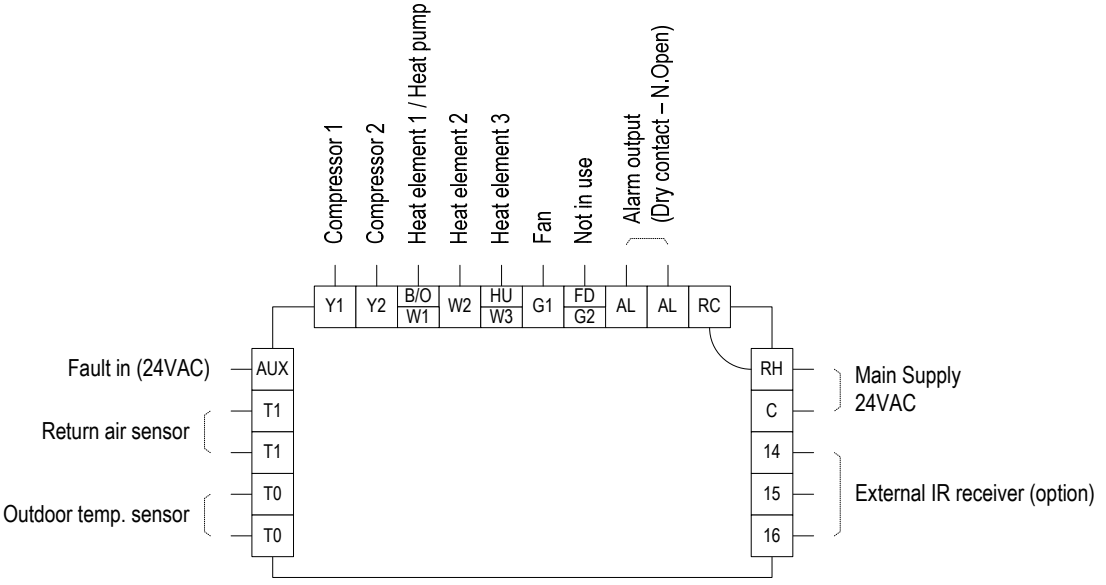
The CTR-24-SUPER thermostat offers a selectable number of heating and cooling stages for Heat Pump or Heat/Cool systems.

The CTR-24-SUPER enables connection of an extra IR receiver panel for remote control from a second location. In addition, it offers an alarm output, a fault input and also indicates outdoor temperature. With built-in Weekly Programming (where set Cool, set Heat may be programmed), the CTR-24-SUPER is a convenient and easy to use, Temperature Control solution.

General Features

- Main supply – 24VAC
- Heat Pump or Heat/Cool configuration available
- Heat pump can be configured for heating or cooling
- Heat Output configuration – Electric or Oil/Gas operation in Heat Mode
- When working with Oil/Gas in Heat Mode the internal fan operation can be disabled
- Multiple stages for Cooling and Heating – up to 2 cooling stages and 3 Heating stages
- Adjustable Set point limits for cooling and heating
- Compressor protection delay timer
- External temperature sensor – optional
- Outdoor temperature sensor – optional
- °F or °C Temperature scale - DIP Switch selectable
- 5-1-1programmable; 4 periods per day, each with Set Heat and Set Cool
- Clock type – AM/PM or 24 Hrs.
- Alarm Output – 24VAC dry contact, normally-open
- Fault Input– 24VAC
- External IR receiver panel for remote control
- Energy Saving – cost effective, environmentally friendly thermostat

Wiring Diagram



CEO/CEM-24-HC22

"Talking Thermostat"

With telephone & voice capabilities, "call-out" options and 5-1-1 weekly programmable, these thermostats are perfect for your second home, cabin or office.

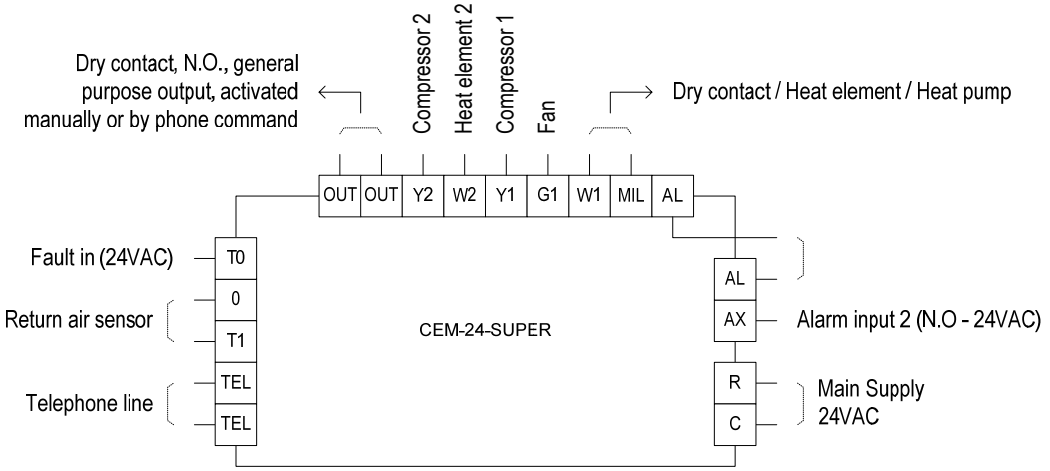
General Features

- Main supply – 24VAC
- Telephone Communication - call the thermostat from remote location to check or set the mode and temperature
- Modes: Cool/Heat/Auto-Change-Over/Auto-fan/ Fan-On
- Up to 2 Heating stages of and 2 Cooling stages
- Heat Output configuration – Electric or Oil/Gas operation in Heat Mode
- When working with Oil/Gas in Heat Mode the internal fan operation can be disabled
- 5-1-1 weekly program
- Compressor protection delay timer
- Economy Mode – to be activated when you leave home for any period of time
- General purpose output (e.g. boiler) – to be activated also by telephone for unlimited time
- °F or °C Temperature Scale (part # dependent)
- Real Time Clock – 24 hours/12 hours (AM/PM)

Model based Features

CEO	CEM
• Thermostat calls-out to user in case of alarm situation, Up to 3 phone numbers can be programmed • Thermostat re-dials every 2 minutes in case of a busy line • Selectable system output configuration (by Jumper) - Heat-Cool 24VAC/ Millivolt (dry contact)	• Alarm activated when temperature reaches pre-set high or low limit, or when fault input is active • Heat Pump in Cool/Heat – jumper selectable • Selectable system configuration- Heat-Cool/Heat Pump/Millivolt (dry contact)

Wiring Diagram



Thermostats - Proportional Outputs

Wall-mount, 24VAC thermostats, for all Fan-Coil Proportional Valve applications.

The proportional series thermostats are designed to control a wide variety of Fan-Coil applications, with Proportional Valves configurations.

Proportional thermostats suggest different proportional outputs such as 0-10VDC or 2-10VDC, 3 wire (Open-Common-Close), Various Fan Speed control combined with additional Energy Saving Algorithms and Logic.

General Features

- Wall-mount, 24VAC thermostats
- Fan-Coil supported configurations:
  - 4 pipe – 2 valves
  - 2 pipe – 1 valve
  - No valve
- Valves Output types:
  - Proportional outputs 0-10VDC or 2-10VDC
  - 3 wire (Open, Common, Close) - Adjustable motor Open/Close time (10 to 400 seconds)
- 1,2 or 3 Fan speeds
- Modes: Cool/Heat/Auto, Cool/Heat/Fan, Cool Only
- Auto Fan Speed – Fan speed will be automatically increased or decreased to achieve user comfort together with Fast Cool/Heat.
- External Temperature Sensor – optional
- Auto-change-over between Cool/Heat by T2 sensor (in 2 pipe systems)
- °F or °C Temperature Scale
- Cool and Heat adjustable temperature limits
- Offset – for temperature reading adjustment
- IR Remote Control - optional
- Daily, digital Timer – optimal when you are asleep or away
- Buttons Lock - optional
- Energy saving – cost effective, environmentally friendly thermostat

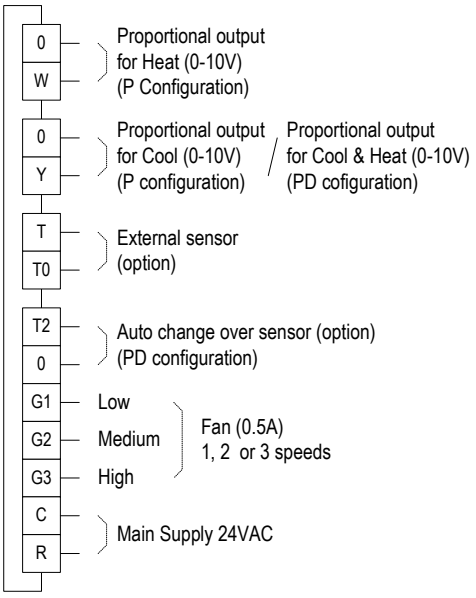
Comparison Table

	ETN-24-P/PD-FC-SUPER2	ETN24-PH-FC-SUPER	ETN24-PM2-3S	ETN24-PMH	ETN24-PMHP
Cool output type	Proportional (0-10V)	Proportional (0-10V)	3 wire (Open/Com/Close)	3 wire (Open/Com/Close)	Compressor w/wo heat pump
Heat output type	Proportional (0-10V)	On/Off	3 wire (Open/Com/Close)	On/Off	1st stage 3 wire (Open/Com/Close) 2nd stage Compressor w/wo heat pump
Fan Speeds	1, 2 or 3	3	3	1 or 3	1 or 2
Oil/Gas operation in Heat Mode		●		●	
Change over Temp. input sensor for 2 pipe system	●				
Contact Input		●			
External Temperature sensor	●	●	●	●	●
IR Remote Control	●	●		●	
Ambient Temperature display	●	●	●	●	
Temperature reading Offset	●	●	●	●	●
Temperature Set-Point limits	●	●		●	●
Auto fan (fan on demand) – optional	●	●	●	●	
Buttons lock – optional	●	●			●
Temperature Scale	°F/°C	°F/°C	°C	°F/°C	°F/°C
Economy Mode		●			●
Daily Timer (Using remote control)	●	●		●	
Freeze Protection					●

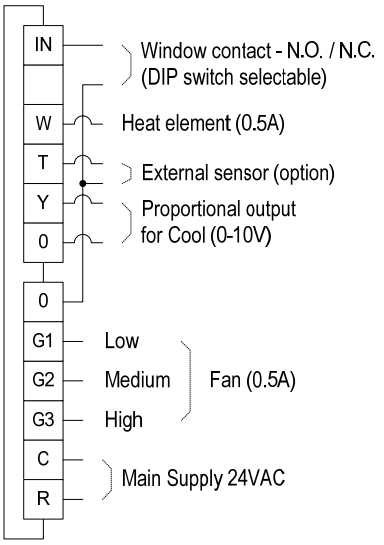
● – standard ○ – option

Wiring Diagrams

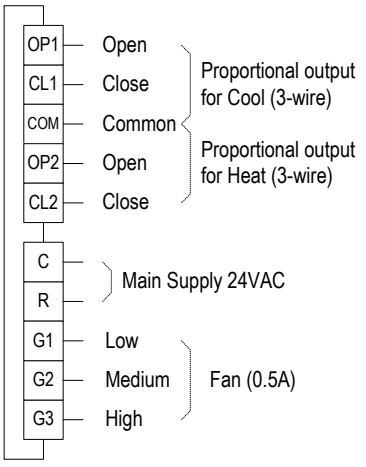
ETN-24-P/PD-FC-SUPER2



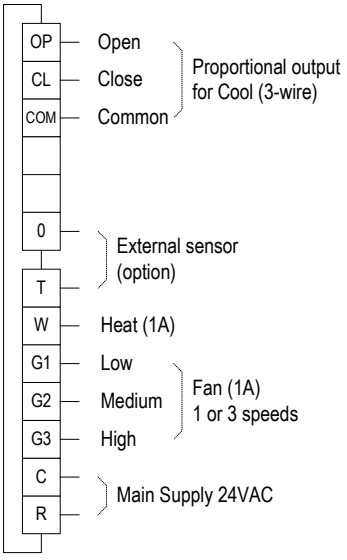
ETN24-PH-FC-SUPER



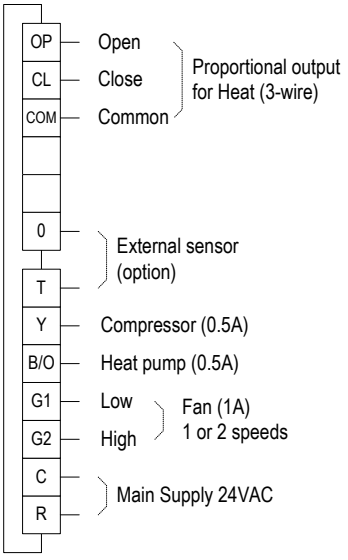
ETN24-PM2-3S



ETN24-PMH



ETN24-PMHP



ETN-24-AZC

Wall-mount, 24VAC damper controller, proportional with an optional duct Temperature Sensor

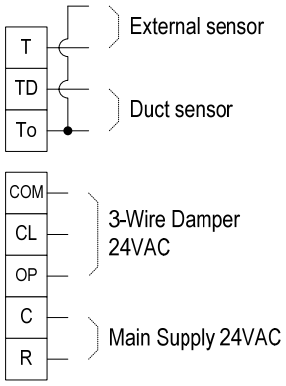
The ETN-24-AZC is a simple to use, stand-alone damper controller with a proportional output. The ETN-24-AZC can control all standard, general purpose dampers - (3-wire, 24VAC) and the Open/Close time is adjustable by the user.

The ETN-24-AZC also has a special optional duct temperature sensor, which senses the airflow temperature and automatically selects the mode (Auto-Change-Over Sensor).

General Features

- Damper Controller , 24VAC
- Proportional, 3 wire (Open, Common, Close)
- Adjustable Damper motor Open/Close time (10 to 400 seconds)
- Optional Duct sensor for Auto Change-Over mode
- Adjustable Set point limits for cooling and heating
- External temperature sensor - optional
- Offset for ambient temperature reading adjustment
- °F or °C Temperature Scale
- IR Remote Control – optional (Model RT41)
- Energy saving – cost effective, environmentally friendly thermostat

Wiring Diagram



*available also as FMT-24-AZC

CHU-24-SUPER

Wall-mount, 24VAC Programmable thermostat, controlling Temperature & Humidity

The CHU-24-SUPER thermostat is a combined Temperature & Humidity controller.

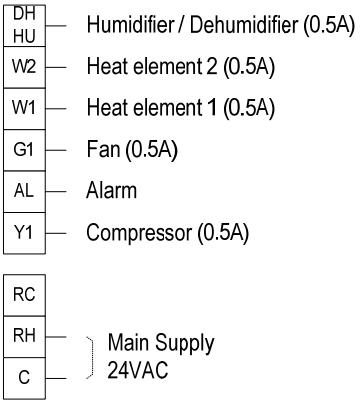
It offers a selectable number of Heating and Cooling stages as well as an output for Humidifier or de-Humidifier. The CHU-24-SUPER has a built-in humidity sensor.

The CHU-24-SUPER also offers weekly programming (where set Cool, set Heat and set Humidity may be programmed) and alarm indication Output in case temperature or humidity limits are exceeded.

General Features

- Wall mount, 24VAC controller
- Heat Pump or Heat/Cool configuration available
- Multiple stages for Cooling & Heating
- Heat Output configuration - Electric or Oil/Gas operation in Heat Mode
- When working with Oil/Gas in Heat Mode the internal fan operation can be disabled
- Output for Humidifier or De-Humidifier (jumper selectable) 24VAC
- Humidity sensor built-in
- Adjustable temperature set point range: 45°F-90°F/5°C-35°C
- Adjustable humidity set point range: 20%-70% RH
- Compressor protection delay timer
- 5-1-1 Weekly Program with programmable set Cool, set Heat and Set Humidity
- External temperature sensor – optional
- °F or °C Temperature scale - jumper selectable
- Real Time Clock – 24 hours/12 hours (AM/PM)
- Alarm output (24VAC) - Indication in case temperature or humidity limits are exceeded
- Internal battery for backup when supply fails
- Energy saving – cost effective, environmentally friendly thermostat

Wiring Diagram



M5001-24

Wall mount, 24VAC controller for Temperature & Humidity, with 4 Proportional outputs (0-10VDC)

The M5001-24 offers unique flexibility and simplicity, allowing users proportional control of both temperature and humidity.

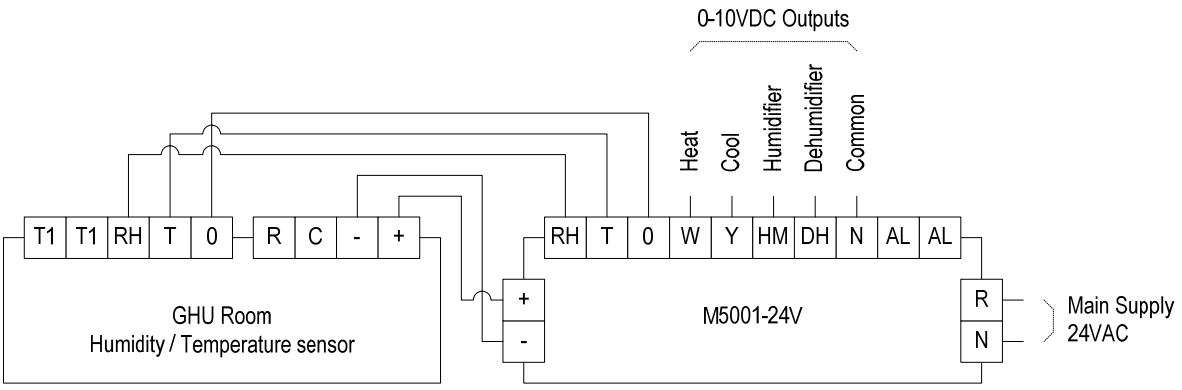
The M5001-24-4X0-10VDC offers 4 different proportional outputs; Cool, Heat, Humidifier and De-humidifier.

Additional features such as wide temperature and humidity ranges, adjustable differentials and adjustable dead-zones, make the M5001-24 a truly unique and practical controller.

General Features

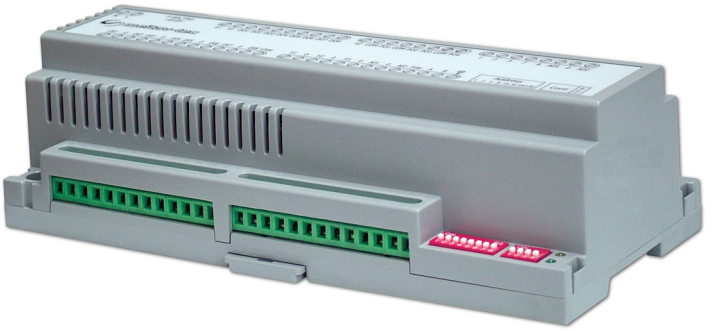
- Wall mount, 24VAC controller
- 4 Proportional 0-10VDC (or 2-10VDC) outputs for:
  - Cool
  - Heat
  - Humidifier
  - De-Humidifier
- Temperature Range 0°C-60°C
- Humidity Range 10%-99% RH
- Works with Meitav-tec GHU sensor- combined temperature and humidity sensor for room or duct

Wiring Diagram



CTU – Main Controller – Building Automation

Main Controller for B.M.S



The CTU is a smart, highly versatile controller; Meitav-tec has especially developed this product to meet the need for a controller, readily implemented for customer's unique HVAC application.

The CTU is a **"Plug & Play"** communicating controller – Does not require Technician Configuration when installed.

The CTU adaptability is an ideal solution for OEM's and Contractors who require "tailor made" controller configured according to their particular requirements at a The CTU controller offers advanced communication protocol capabilities, such as Modbus or BACnet for B.M.S control and selectable power supplies 24VAC, 110VAC or 230VAC.

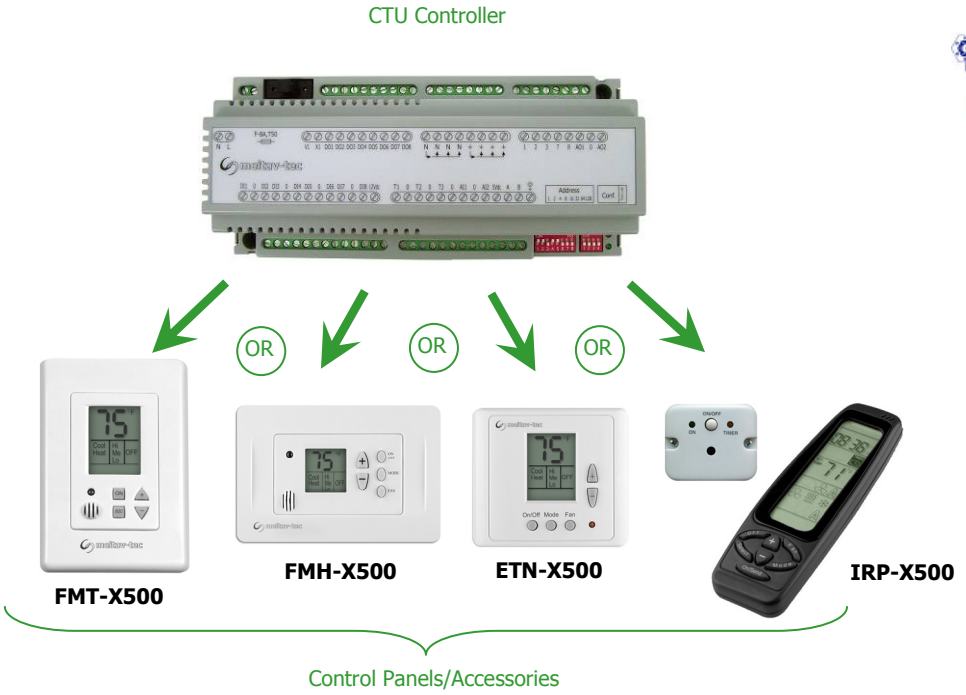
BACnet BTL Modbus

CE

General Features

- Main supply: 24VAC, 110VAC or 230VAC
- RS-485 Communication port – Available in BACnet, Modbus and proprietary Maxinet protocols.
  - CTU2500 Family – BACnet protocol (BTL Certified)
  - CTU4500 Family – Modbus protocol
  - CTU1800 Family – Maxinet proprietary protocol
- Panel interface to various designs Wall/flush mount/IR panels - optional
- Inputs
  - 8 x Digital Inputs
  - 2 x Analog inputs (0-10VDC)
  - 3 x Temperature Sensor inputs 50K @ 77°F
- Outputs
  - 8 x Digital Outputs (24VAC 110VAC or 230VAC – depending on the supply voltage)
  - 2 x Analog Outputs (0-10VDC)
  - 2 x 3-wire 24VAC (Open-Common-Close)
- 12VDC power supply for occupancy sensor
- Adjustable Set point limits for cooling and heating
- Auto fan (fan on demand) – optional
- Fan On/Auto-Fan in Cool/Heat – DIP switch selectable
- Offset – for temperature reading adjustment
- IR input
- 2 indication LEDs
- MAC address 1-255 by DIP switch
- 4 DIP switches for configuration purposes
- DIN rail connection
- CE certified
- Energy saving – cost effective, environmentally friendly controller

Wall Panels Configurations



Applications

CTU Fan-Coil controllers

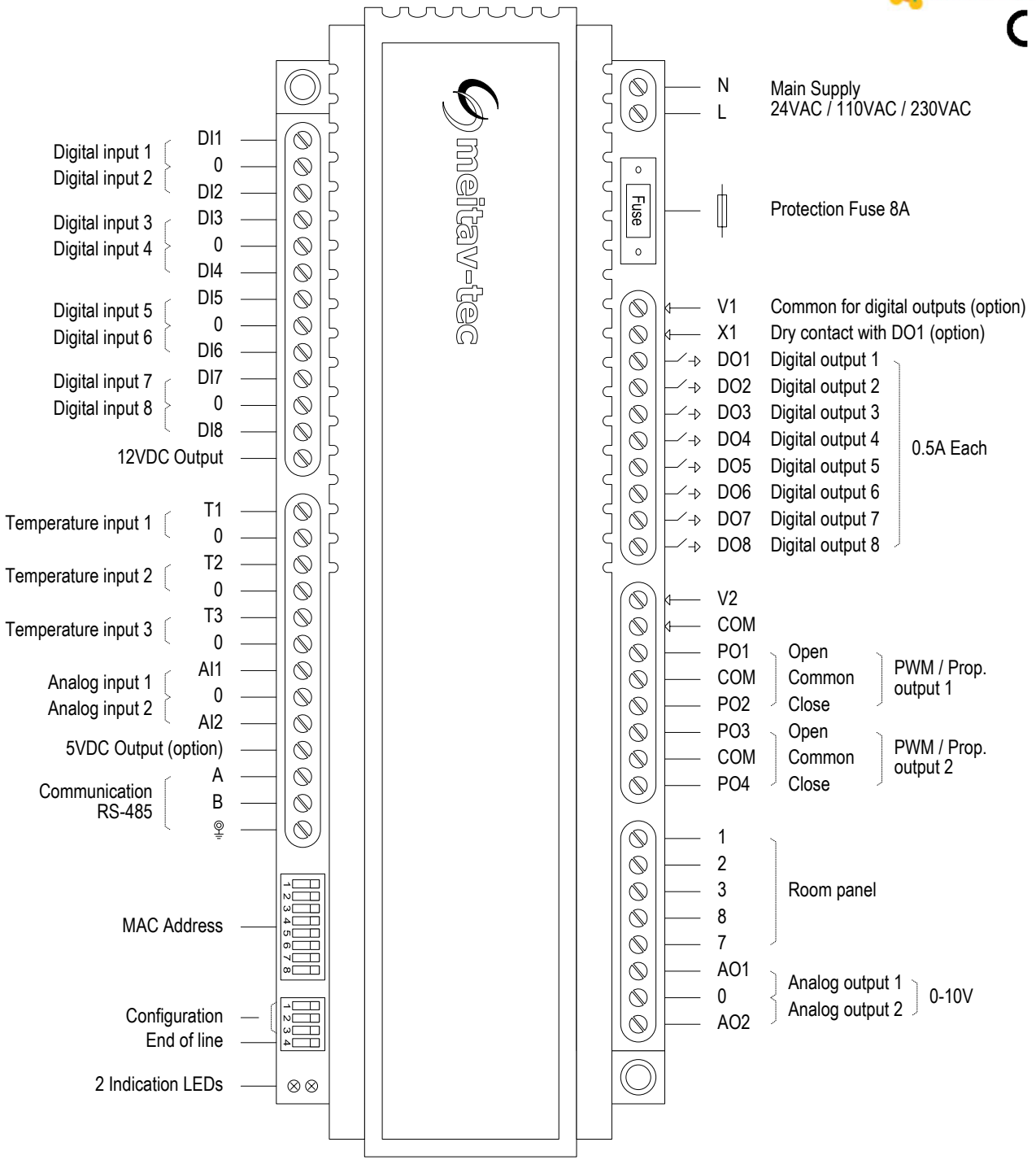
FC-SUPER	On/Off
P-FC-SUPER	0-10VDC proportional for Valve/Fan
PM2-FC-SUPER	3 wire (Open/Common/Close) 24VAC
TA2-FC-SUPER	Thermal Actuator (230VAC)

CTU Air Condition controller

AC-SUPER	Compressor & Heat Pump outputs
WSHP (Water Source Heat Pump)	Compressor & Heat Pump

Outputs operation

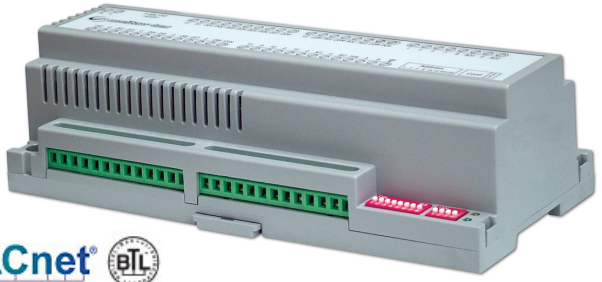
CTU - General Wiring Diagram



CTUx601 - Input/Output Card

Input/Output card for BACnet or Modbus communication net

The CTU-x601 is an Input/Output (I/O) card for BACnet, Modbus or Maxinet communication network, designed to control various devices from the Building Automation Server/Application.



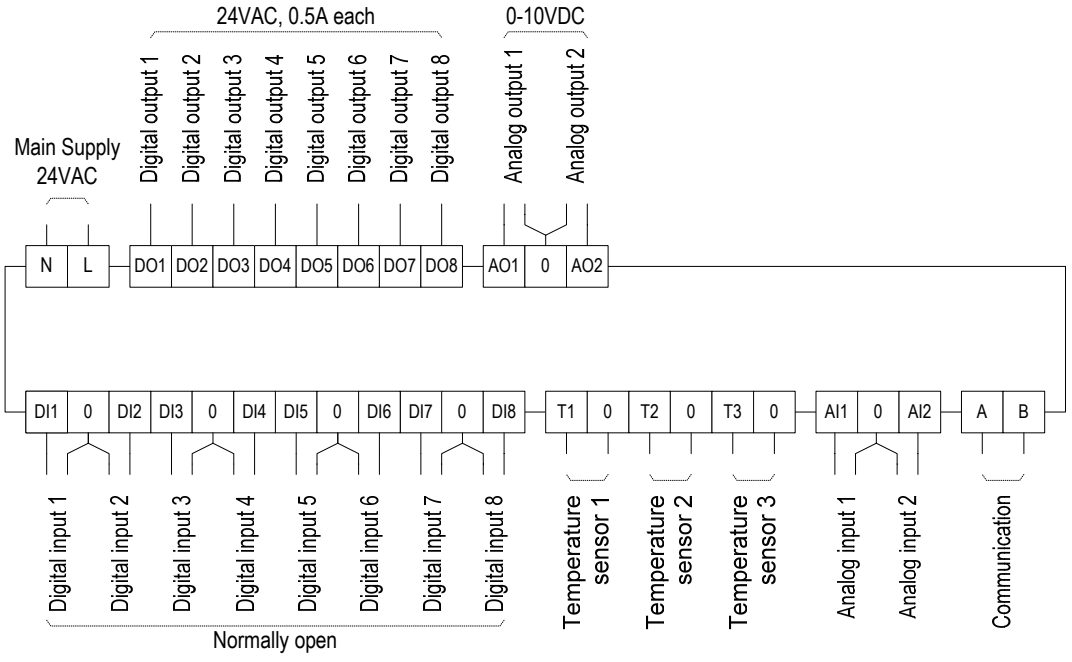
BACnet Modbus CE

General Features

- Main supply: 24VAC, 110VAC or 230VAC
- RS-485 Communication port – Available in BACnet, Modbus and proprietary Maxinet protocols.
  - CTU2601 Family – BACnet protocol (BTL Certified)
  - CTU4601 Family – Modbus protocol
  - CTU1601 Family – Maxinet proprietary protocol
- 8 x Digital Inputs – voltage free – dry contact
- 3 x Temperature Sensor inputs 50K @ 77°F
- 8 x Digital Outputs – Available in either 24VAC, 110VAC or 230VAC
- 2 x Analog Outputs, 0-10VDC
- Easy connection to DIN Rail
- MAC Address selection by DIP Switches

Note: 24VAC to Dry contact Adaptor can be supplied upon order.

Wiring Diagram



CTU2646 - Input/Output Card

Input/Output card for BACnet or Modbus communication net

The CTU2646 is an Input/Output (I/O) card for BACnet or Modbus communication protocols, designed to control various devices from the Building Automation Server/Application.

BACnet BTL

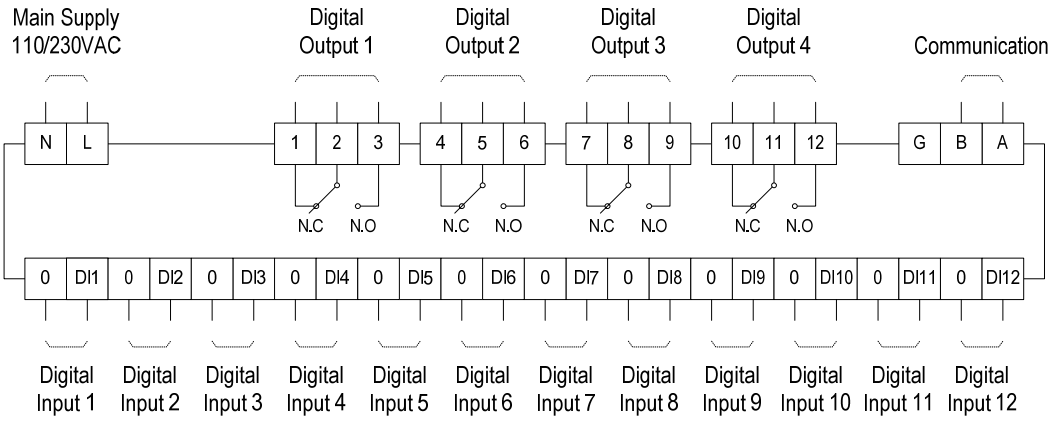
Modbus

General Features

- Main supply: 110VAC or 230VAC
- RS-485 Communication port - BACnet (BTL certified) or Modbus operation selectable by DIP switch
- 12 x Digital Inputs – voltage free – dry contact
- DI12 digital input can be converted to 24V Input - jumper selectable
- 4 X Digital outputs (Change Over)
- Selectable Digital outputs configuration - N.O/N.C
- Easy connection to DIN Rail
- MAC Address selection by DIP Switches

Note: 24VAC to Dry contact Adaptor can be supplied upon order.

Wiring Diagram



VAV Controller - Modbus & BACnet

Main controller, 24VAC for VAV applications with Modbus or BACnet BMS interface

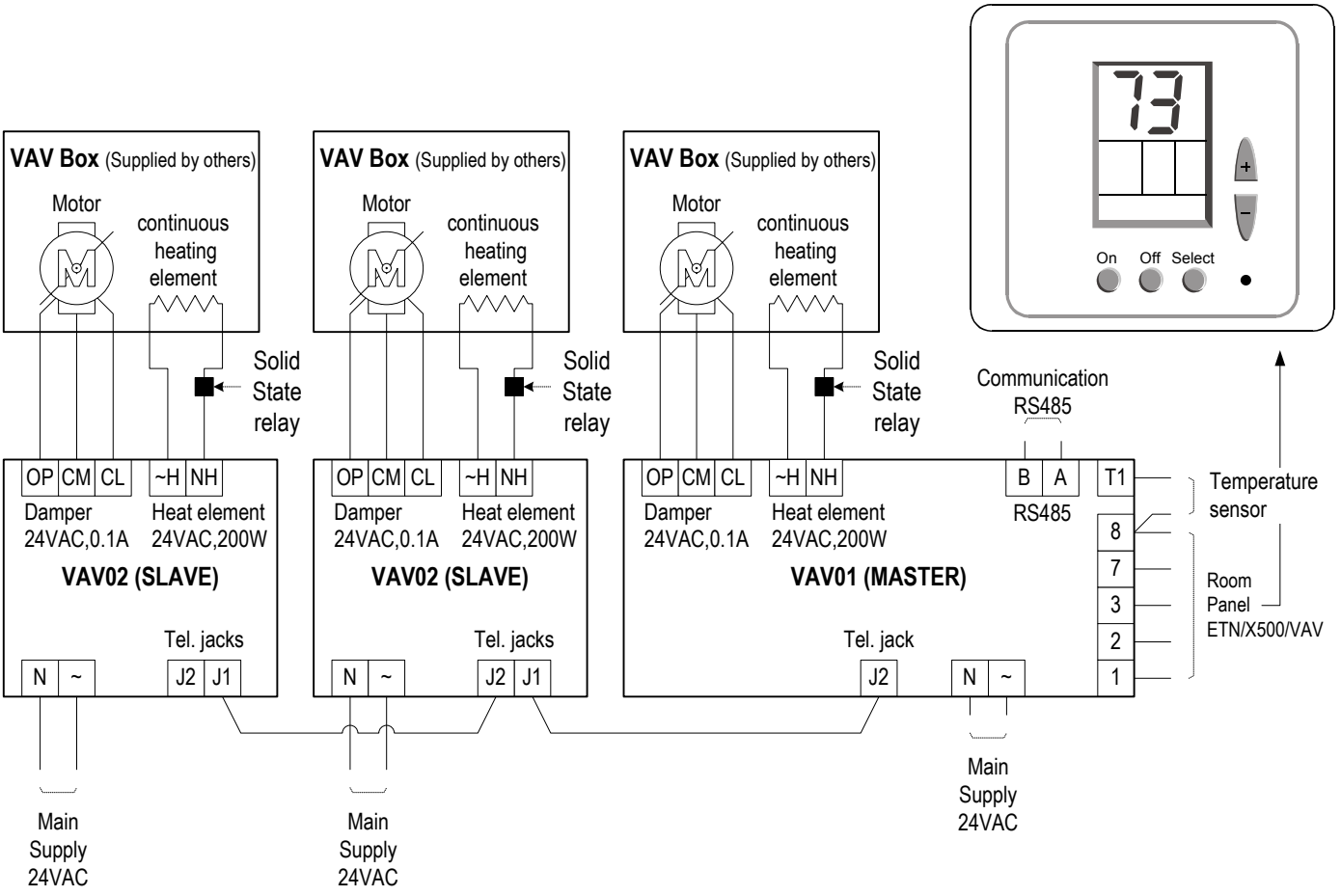
The VAV controller is designed to work with VAV (Variable Air Volume) dependent pressure units.

The VAV controller consists of Master and Slave units (up to 3 Slaves per Master unit) and can operate as part of a B.M.S control network or as standalone units.

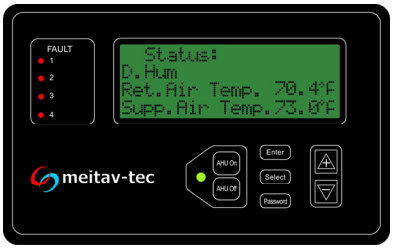
General Features

- Main supply – 24VAC
- RS-485 Communication port – Available in BACnet or Modbus protocols
- Output for Cool - 3 wire (Open, Common, Close) 24VAC
- Wall panel – ETN type
- Offset – for temperature reading adjustment
- Optional Slave units, useful in large spaces – the slave unit mimics the master operation
- can be used with electric heater or hot water valve for reheat – Model Dependant

Wiring Diagram



CTU – Air Handling Unit Controller

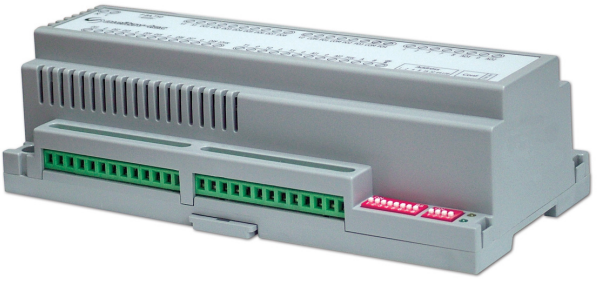


AHU Controller

Meitav-tec CTU AHU Controller has been designed and configured to control Air Handling Unit (AHU) as per customer's specifications.

The CTU AHU is a "Plug & Play" controller, suitable for small/medium AHU without the need to modify/program the software for each application.

This high performance, reliable controller is locally operated by a panel display and communicates with the B.M.S by Modbus protocol.

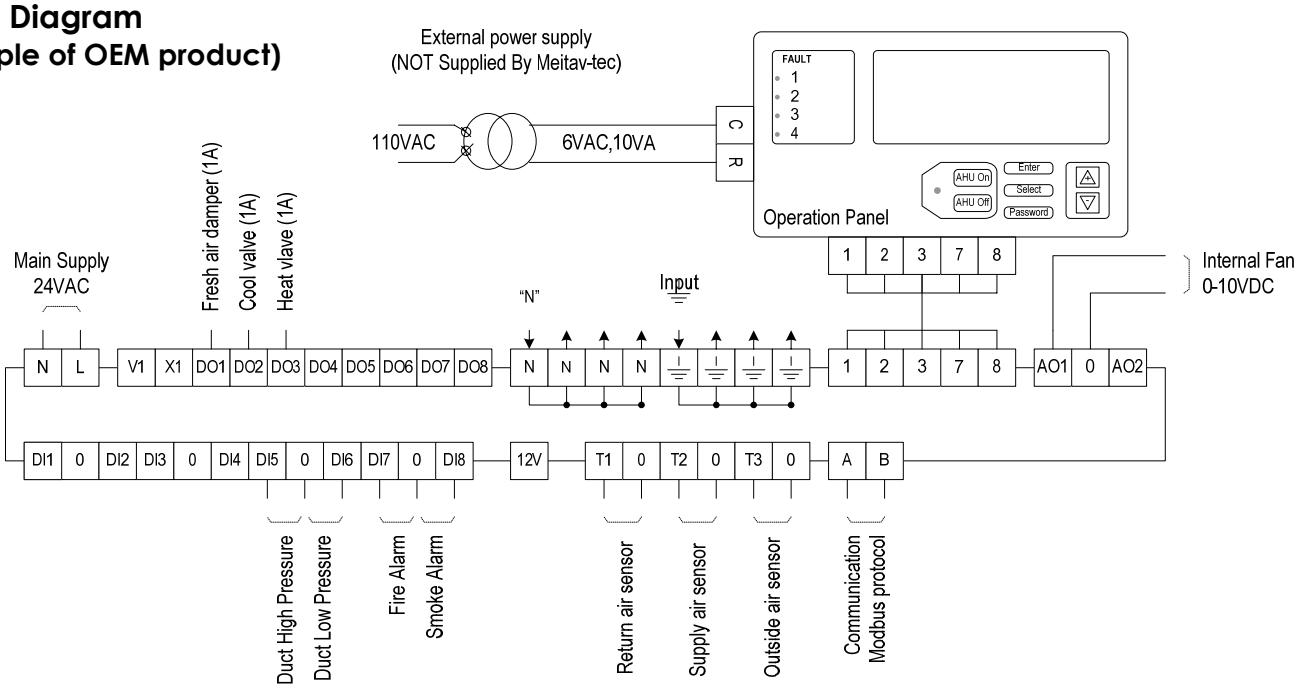


General Features

- Main supply: 24VAC, 110VAC or 230VAC
- Outputs:
  - Cool Valve
  - Heat Valve
  - Fresh Air Damper
  - Internal Fan – proportional 0-10VDC
- Inputs:
  - Return air
  - Supply air
  - Outdoors air
- Digital inputs (Dry contact):
  - Duct High pressure
  - Duct Low pressure
  - Fire alarm
  - Smoke alarm
- Easy connection to DIN Rail
- MAC Address selection by DIP Switches

Note: other configurations and Features are available Per customer specifications

Wiring Diagram (Example of OEM product)



TCP/IP - Web HVAC Network Controller & Viewer

The TCP/IP/WEB controller is an ideal solution for real-time monitoring and control of a thermostat network, via the internet, without the need for designated computer.

The TCP/IP/WEB enables web access to the HVAC Network Control program via an exclusive IP, and therefore doesn't require a main control computer. Up to 4x60 Meitav-tec thermostats/controllers can be connected to each TCP/IP/WEB via RS-485 communication network making the control simple, easy and most importantly accessible from any device with internet connection.

The TCP/IP/WEB offers a user friendly interface with options for area/floor scheme display, text alarms to cellular phones, weekly programs, data logger and more.

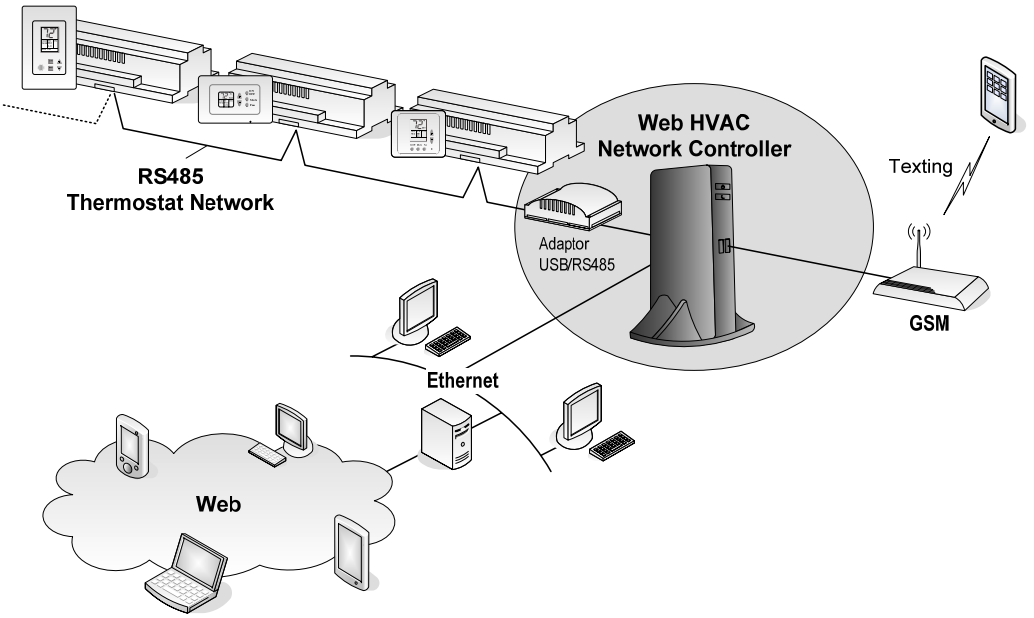
General Features

- Main supply: 110VAC or 230VAC
- Real-Time, thermostats network main controller
- Web access to each controller via exclusive IP
- Adjustable Set point limits for cooling and heating
- Weekly programs
- Data logger (can be exported to Excel)
- Alarm to telephone numbers by Texting - optional
- Ethernet/Internet Connection

Benefits

- Friendly, clear graphic display of all units
- Remote control of all units in the network
- Replaces the need for dedicated computer on site
- System continues to work as a standalone system when disconnected from the web

Schematic Layout

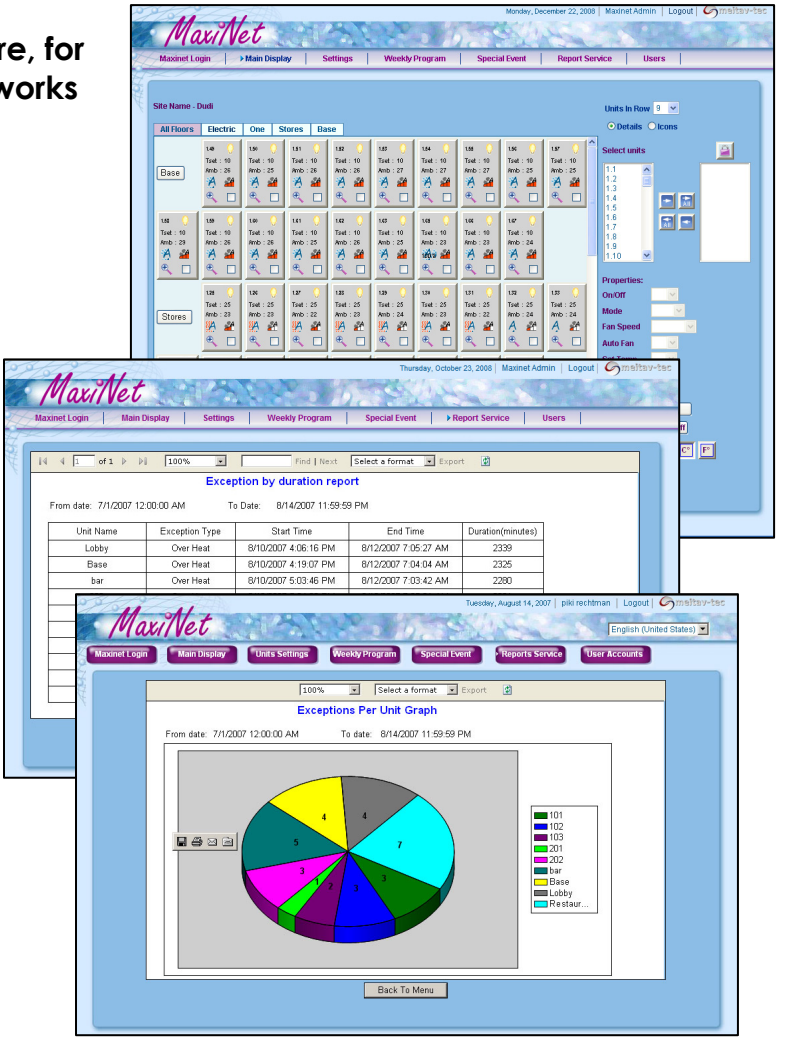


Maxinet – Mini B.M.S. Control software

Maxinet is a Web based, mini B.M.S. software, for controlling small to medium size HVAC networks

Maxinet allows remote access to the HVAC system from anywhere in the world. Administrators/Maintenance controllers can very easily view and manage the HVAC end-units from a remote location. With a simple click of the mouse, they can change operating mode, enter new temperature set points or turn on/off specific units/zones. Maxinet also offers cost effective capabilities and can ultimately save users 20-30% of overall electricity expenses. Weekly Program, Special Event Tool, Cost & Usage reports and graphs are only some of the energy saving features of Maxinet.

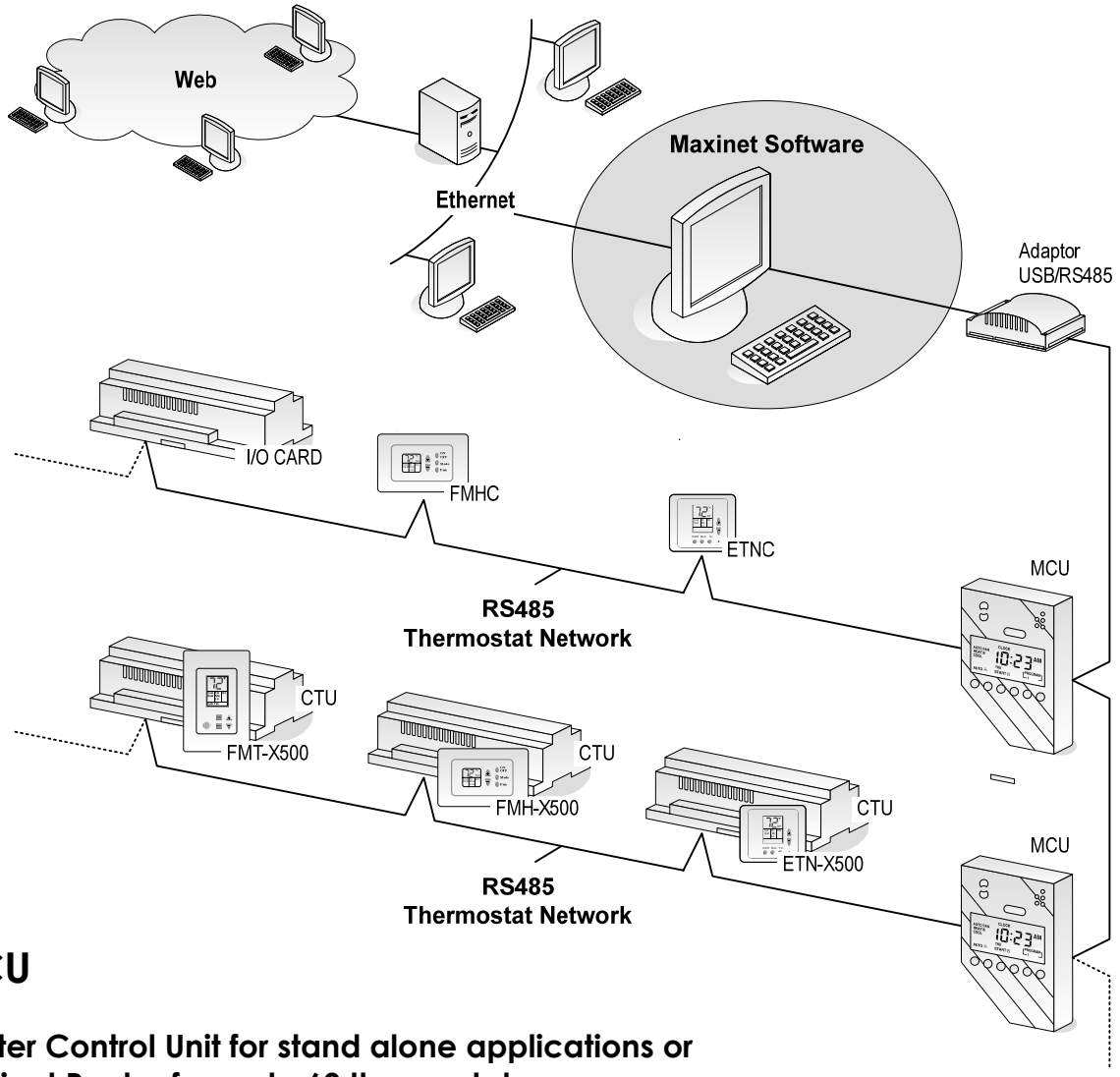
The Maxinet is a generic SW suitable to any site without the need to configure the SW or load the units' parameters. The HVAC controllers are automatically detected; the installation process is simple and can be done by any HVAC technician.



General Features

- HVAC Building Management System
- Remote access to the B.M.S. via the internet & local intranet
- User friendly, easy to operate program
- Easy installation wizard – "Plug & Play"
- One thermostat, One icon - clear view of each thermostat settings
- Energy saving - reduces HVAC electricity expenses by 20%-30%
- Numerous, cost effective, flexible 'weekly programs' for unit/zone
- 'Special Event Tool' – unique programs for holidays or special off days
- Lock thermostats buttons or limit the set points for each unit separately or by groups/floors.
- Multi-language interface
- Controls also other energy consuming devices/systems via I/O card

Schematic Layout



MCU

Master Control Unit for stand alone applications or Maxinet Router for up to 60 thermostats

The MCU is a Master Control Unit for stand-alone applications to control up to 60 thermostats.

It is also applicable as a router for large network applications in Maxinet B.M.S. or just for simple divisions in installations such as floors or large buildings.

General Features

- View and change units settings in the network
- Easy to change each unit settings:
  - Mode
  - Fan speeds
  - Set temperature
  - Set temperature limit
  - On/Off
- Weekly Program for 7 days - when working as stand alone master
- Emergency Weekly Program (EWP) , automatically activated when Maxinet software is down
- Connect up to 12 MCUs to one Maxinet software

ETNC-24-SUPER- Maxinet protocol

Wall mount, 24VAC thermostat

Having most A/C applications built-in, field selectable and offering several stages of Cool and Heat, the ETN-C-24-Super is suitable for either Heat/Cool or Heat Pump systems.

It offers built in Maxinet protocol, for a cost-effective networking solution in small to medium size BMS.

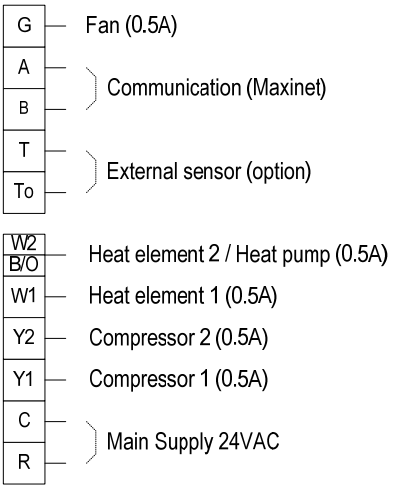
General Features

- Wall mount, 24 VAC thermostat
- DIP switch selectable applications:
  - Heat/Cool or Heat Pump
  - Electric Heat or Oil/Gas operation in Heat Mode
  - Heat Pump in Heat or Heat Pump in Cool
- MAC address configuration via DIP switches
- Maxinet Communication Built in
- Up to 3 stages for Heat and 2 stages for Cool
- Adjustable Set point limits for cooling and heating
- External Temperature sensor – optional
- °F or °C temperature scale
- Economy mode
- Easy to install and use

Models

Model	Heating Stages	Cooling Stages	Speeds
ETNC-24-HC11-1S	1	1	1
ETNC-24-HC22-1S	2	2	1
ETNC-24-HP11-1S	1	1	1
ETNC-24-HP21-1S	2	1	1
ETNC-24-HP32-1S	3	2	1
ETNC-24-SUPER	1	1	1,2,3

Wiring Diagram



Note: Various CTU units are also available with Maxinet protocol

TLC-24

24VAC, Temperature Limit Controller for energy saving. The TLC will Turns the compressor On/Off as per adjustable temperature limits.

The TLC is a simple, yet efficient Temperature Limit Controller which offers substantial energy saving of Air Conditioning by limiting 'Set Temperature'.

The TLC is compact and easy to install at any existing Air Conditioning system by connecting the compressor relay line to the TLC, the TLC overrides the Air Conditioning control system and therefore can limit the Cool/Heat set points.

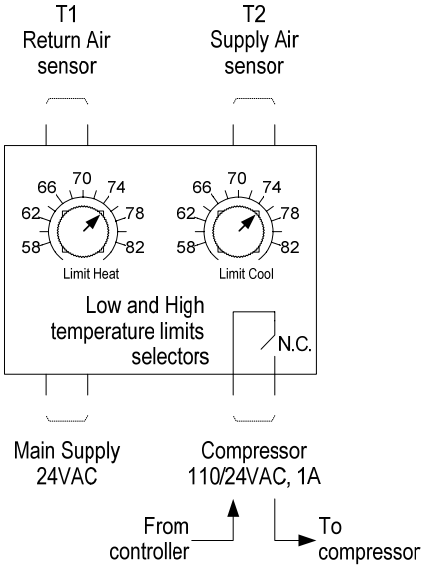
Limit Cool & Limit Heat values are configurable. The TLC will automatically re-operate the compressor according to these values.

Field Tests showed 25-40% energy saving using the TLC-24

General Features

- Adjustable Set point limits for cooling and heating using 2 manual knobs
- Power supply - 24VAC for HVAC operation
- 1A, 24VAC dry contact for compressor relay
- Random compressor delay Algorithm – jumper selectable
- Easy, quick installation in any existing AC system
- TLC installation requires no modification in the existing room devices
- No change to user operation of the Air Conditioning system
- Fast Return On Investment (ROI)

Wiring Diagram

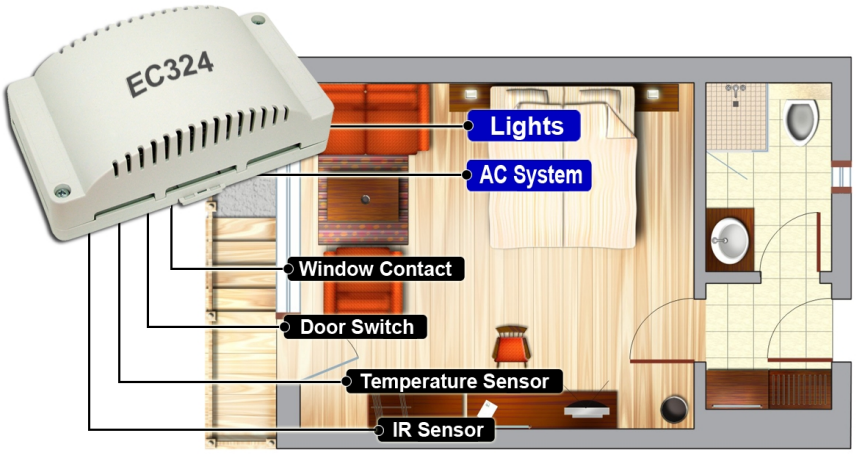


EC324

24VAC, energy saving controller, for offices or hotel rooms.

Turns On/Off HVAC and lighting systems per presence in a room via an Occupancy Sensor and optional Contact Inputs

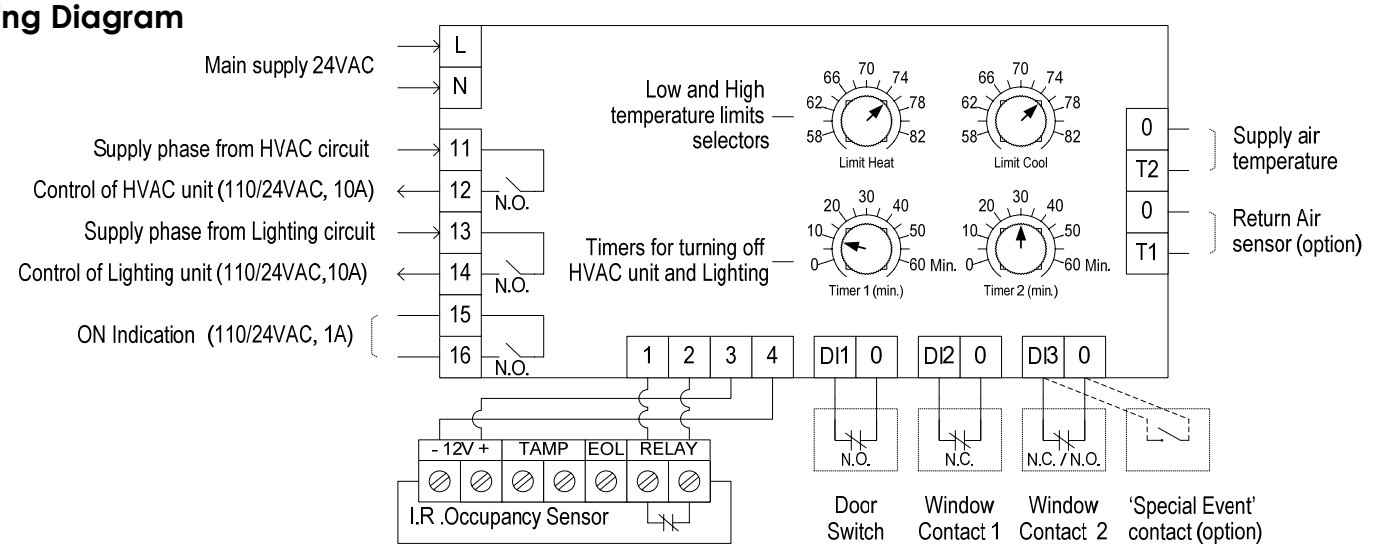
The EC-324 offers substantial energy saving of Air Conditioning & Lighting operation in hotel rooms, offices or conference rooms.



General Features

- Power supply - 24VAC, 10A for HVAC operation
- Detects presence based on an IR Occupancy sensor and Contact Inputs on door entry or window
- Easy, quick installation at voltage line, between an existing HVAC/lighting system and Power Supply
- Inputs:
  - IR Occupancy Sensor – turns off HVAC and lighting after adjustable time (separate for HVAC and lighting)
  - 2 Window Contacts – N.O. or N.C selectable
  - Door Switch – special logic for hotel rooms
  - Temperature sensors
- Adjustable Set point limits for cooling and heating
- EC324 installation requires no modification the existing room devices
- EC324 Controller supplies 12VDC voltage to IR sensor
- DIP switch selectable options:
  - Hotel or Office configuration
  - With or without compressor delay
  - Window contact configuration (N/O or N/C)

Wiring Diagram



GAQ - Air Quality Controller & Sensors

24VAC wall mount, Air Quality controller with 24VAC Duct/Room sensors

The GAQ series are Air Quality Sensors and Controllers that automatically react to air pollution sources (PPM). They sense tobacco smoke, toilet odors, strong kitchen smells, etc, and mechanically regulate ventilated areas such as cinemas, pubs, restaurants, toilets or conference rooms.

The sensor switches the fan on when air quality drops below a preset, adjustable level. The sensing head of the unit is self-cleaning; a process which occurs each time the unit is triggered. When atmosphere has returned to normal, the fan switches off.

General Features

Wall mount, Air Quality Controllers

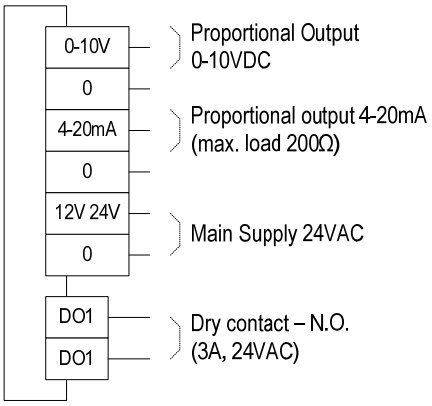
- Main supply - 24VAC
- The controller has 3 outputs:
  - Proportional output 0-10VDC for variable fan speed or B.M.S. applications.
  - Proportional 4-20mA Output
  - Dry Contact for direct fan switching (On/Off) or Alarm indication
- Set point for Air Quality - adjustable
- Indication lights showing unit status (On/Off)
- Self cleaning sensor

Room or Duct air quality sensors

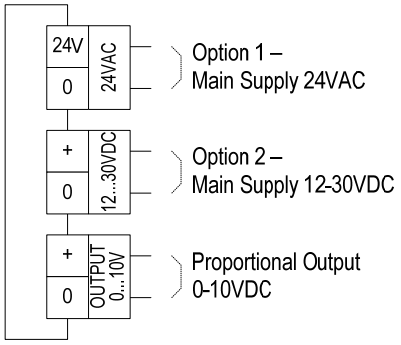
- Power supply - 24VAC or 12-30VDC
- Sensor has proportional pre-defined output 0-10VDC

Wiring Diagrams

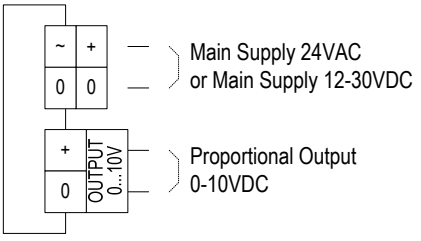
GAQ



GAQ Room sensor



GAQ Duct sensor



SensiCO PX300 – CO Sensor

Sensor for measuring carbon monoxide (CO) concentration

SensiCO PX 300 is a reliable sensor for measuring Carbon Monoxide (CO) concentration in enclosed locations, such as parking garages.

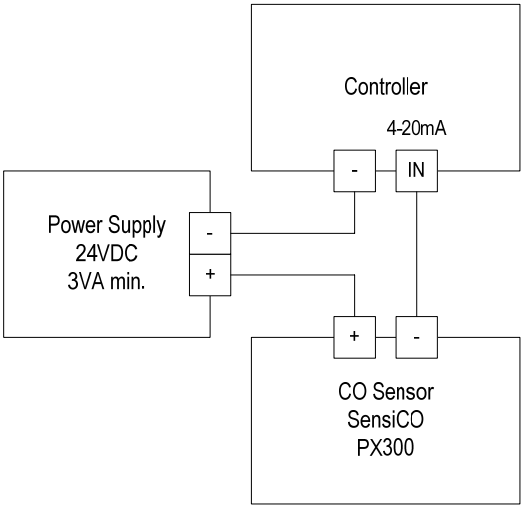
When CO concentration exceeds 50 PPM, a signal to the ventilation system is activated and an alarm is sent to the car park management/ control. SensiCO PX 300 may be connected to a self-control system or to the B.M.S. (Building Management System), using its analog output

General Features

- Approval/Certification: TÜV per VDI – 2053 (Air treatment systems for car parking)
- Detection principle: Electro-chemical
- Operation: Continuous
- Gas entry: by diffusion
- Measuring range: 0-300 ppm CO in air
- Reproducibility : < 3 ppm
- Response time 90: < 60 sec
- Cross sensitivity: < 2% on 300 ppm CO according VDI 2053
- Linearity: < 2% on 300 ppm CO according VDI 2053
- Operating temperature range: -10°C to +40°C
- Humidity range: 15 - 95% relative humidity, non condensating
- Signal: 4-20 mA, max. load 300Ω
- Connection: 2 – wires
- Zero adjustment: Automatic, calibration free
- Sensitivity adjustment: via potentiometer
- R.F.I According EN 50 081-1 resp. EN 50 082-2 B

Filter: For dust and water protection

Wiring Diagram



Remote Control Units

Hand held remote control unit

Easy-to-use infra-red remote control unit, suitable for Meitav-tec thermostats and receivers, with big LCD and a large temperature digit display.

General Features

- On/Off
- Mode selection
- Fan speed Selection
- Temperature set point
- Timer - Start/Stop
- Operated by 2 X AAA battery
- Real time clock & weekdays
- °F or °C temperature scale
- Available in black or white color

TS-01, 02, 05, 06/RS-01, 02/DT02 Temperature Sensors

External temperature sensors:

RS01/RS02

TS05/TS06

TS-01 External Temperature Sensor, includes 30" (80cm) cable

TS-02 External Temperature Sensor, includes 70" (180cm) cable

TS-05 External Temperature Sensor, includes 30" (80cm) cable -insulated

TS-06 External Temperature Sensor, includes 115" (300cm) cable - insulated

External Temperature Sensor in a decorative box Dimensions – 1.8" x 1.5" (46 mm x 38 mm):

RS-01 Temperature Sensor

RS-02 Average Temperature Sensor

DT-02 Duct Temperature Sensor

DT02

TS01/TS02

General Features

- 2 wire Cable – AWG 24 BLACK
- Thermistor color – silver or brass (white when insulated)
- Dimensions of Thermistor 1" x 0.25" (2.5 cm x 0.6 cm)
- Resistance – 77°F/25°C; = 50 KΩ
- Thermal Time Rate – 15 seconds
- Range - 39°F to 230°F ; -40°C to 110°C
- Thermistor type - NTC

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